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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/749,071	12/30/2003	Jennifer Dean	145581-1	7947
43248	7590	07/11/2006	EXAMINER	
CANTOR COLBURN LLP - GE PLASTICS - SMITH			AN, SANG WOOK	
55 GRIFFIN RD SOUTH			ART UNIT	
BLOOMFIELD, CT 06002			PAPER NUMBER	

1732

DATE MAILED: 07/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/749,071	<b>Applicant(s)</b> DEAN ET AL.	
	<b>Examiner</b> Sang W. An	<b>Art Unit</b> 1732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 27 April 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102/103***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 18-20 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Masumoto (20020023292).

Regarding claims 18-20, Masumoto teaches a goggle made of aromatic polycarbonate with an anti-fog treatment (par 0025). The disclosed product of Masumoto in addition to the disclosed product of Parthasarathy et al modified by Oda et al's teaching, as described in claims 1, 16, and 17 rejections below, and the instantly claimed product appear to be essentially the same, comprised of the same components, fog resistant aromatic thermoplastic polymer/polycarbonate, and used in the same manner. In the event any differences can be shown for the product of the product-by-process claims 18-20 as opposed to the product taught by Parthasarathy et al in view of Oda et al, such differences would have been obvious to one of ordinary skill in the art as a routine modification of the product in the absence of a showing of unexpected results. See *In re Thorpe*, 227 USPQ 964 (Fed. Cir. 1985). Also, when the examiner has found a substantially similar product as in the applied prior art, the burden of proof is shifted to applicant to establish that their product is patentably distinct and not the examiner to show the same process of making. *In re Brown*, 173 USPQ 685, and *In re Fessmann*, 180 USPQ 324.

***Claim Rejections - 35 USC § 103***

5. Claims 1-7 and 11-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parthasarathy et al (6225391) in view of Oda et al (2003/0109660).

Regarding claims 1, 5, 6, 16, and 17, Parthasarathy et al teach a method for making a fog resistant thermoplastic article (abstract), comprising: exposing a thermoplastic polymer article to an aqueous environment sufficient to result in a fog resistant thermoplastic polymer article (col 7 lines 1-15 & cols 3 & 4), wherein the fog

Art Unit: 1732

resistant aromatic thermoplastic polymer article has a greater fog resistance when compared to the thermoplastic polymer article prior to exposing and a fog resistant article prepared from the above method (col 7 line 1-4).

Parthasarathy et al also teach blending polyolefin polymers with anti-fogging agent siloxane which are activated when exposed to humidity. However, Parthasarathy do not teach that the thermoplastic polymer article is aromatic. Nevertheless, one with ordinary skill in the art would know to admix siloxane into variety of polymer types such as aromatic thermoplastic polymers in order to achieve the anti-fogging effect. In light of this, Oda et al teach blending/admixing 50-95 wt % aromatic polycarbonate and 0.1 to 30 parts by weight of siloxane (par 0031). Therefore it would have been obvious to one having ordinary skill in the art at the time of invention to modify Parthasarathy's method for making a fog resistant thermoplastic article to include aromatic carbonate polymer as the base polymer material. One would have been motivated to do so to improve the material properties of the article such as impact resistance, heat resistance, and transparency (par 0004).

Regarding claim 2, Parthasarathy et al teach exposing the fog resistant thermoplastic article to steam, exposing to water vapor, immersing in water, spraying with water, misting with water, or combinations comprising at least one of the foregoing (col 7 lines 4-9).

Regarding claim 3, Parthasarathy et al teach that exposing is performed for greater than or equal to about 20 minutes (col 9 lines 29-34).

Regarding claim 4, Parthasarathy et al teach that the exposing is performed for greater than or equal to about 45 minutes (col 9 lines 2-34).

Regarding claim 7, Parthasarathy et al teach adding an ionic or non-ionic anti-fog additive (col 9 line 29-31).

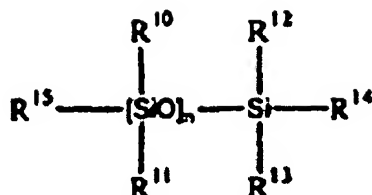
Regarding claim 11, Parthasarathy et al teach the ionic or non-ionic anti-fog additive is present in an amount of about 0.1 to about 10 weight percent based on the total weight of the composition (col 9 lines 37).

Regarding claim 12, Parthasarathy et al teach that the non-ionic anti-fog additive is a polysiloxane-polyether copolymer, a poly(propylene glycol)-poly(ethylene glycol)-poly(propylene glycol), or a poly(ethylene glycol)-poly(propylene glycol)-poly(ethylene glycol) (col 2 lines 21-22).

Regarding claim 13, Parthasarathy et al teach that the polysiloxane-polyether copolymer comprises a backbone of a methyl-substituted siloxane, phenyl-substituted siloxane, random copolymer of methyl and phenyl substituted siloxane, block copolymer of methyl and phenyl substituted siloxane, branched polymer of methyl and phenyl substituted siloxane, or star polymer of methyl and phenyl substituted siloxane, and wherein polyether is bonded to one or more ends of the siloxane backbone, grafted onto the siloxane, or both (column 3).

Regarding claim 14, Parthasarathy et al teach that the polysiloxane-polyether copolymer is according to the formula

Art Unit: 1732



wherein n is about 3 to about 5000., and R<sup>10</sup>, R<sup>11</sup>, R<sup>12</sup>, R<sup>13</sup>, R<sup>14</sup>, R<sup>15</sup> are each independently hydrogen, a C1-C20 alkyl group, a C6-C12 aryl group, a (C1-C20 alkyl)C6-C12 aryl group, a (C6-C12 aryl)C1-C20 alkyl group, a C1-Cx20 alloy, or polyether group, with the proviso that at least one of R<sup>10</sup>, R<sup>11</sup>, R<sup>12</sup>, R<sup>13</sup>, R<sup>14</sup>, or R<sup>15</sup> is a polyether group (column 3).

Regarding claim 15, Parthasarathy et al teach that the fog resistant aromatic thermoplastic polymer article is free of an anti-fog coating (col 2 lines 19-35).

6. Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parthasarathy et al (6225391) in view of Oda et al (2003/0109660) as applied above for claims 1-7 and 11-20, further in view of Schulz et al (6040053). The teachings of Parthasarathy et al in view of Oda et al are as described above for claims 1-7 and 11-20.

Regarding claims 8-10, Parthasarathy et al do not teach an anti-fog additive that is quaternary-alkyl ammonium sulfuric acid. However, Schultz et al teach anti-fog additive that is quaternary-alkyl ammonium sulfuric acid (col 6 line 1 – col 7 line 16). Therefore it would have been obvious to one having ordinary skill in the art at the time of invention to modify Parthasarathy et al's method for making a fog resistant thermoplastic article to include an anti-fog additive comprising quaternary-alkyl

ammonium sulfuric acid in order to produce optically clear articles having very low reflection and exceptional anti-fogging properties even under high humidity conditions (col 1 lines 11-17).

***Response to Argument***

7. Applicant's arguments, see pages 7-9, filed 4/27/2006, with respect to the rejection(s) of claim(s) 1-20 under 35 U.S.C. § 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Parthasarathy et al, Oda et al, and Schulz et al.

***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sang W. An whose telephone number is (571) 272-1997. The examiner can normally be reached on Mon-Fri 9 AM - 6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina A. Johnson can be reached on (571)272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1732

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Sang Wook An *SWA*  
Patent Examiner  
Art Unit 1732  
June 26, 2006

*CT*  
CHRISTINA JOHNSON  
PRIMARY EXAMINER  
*6/7/06*